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Melanesia: Social Anthropology. **Róheim.**

Cannibalism in Duau, Normanby Island, D'Entrecasteaux Group, Territory of Papua. *By Géza Róheim, Ph.D.*

This paper is based on field work carried out by the author in Duau, Normanby Island, D'Entrecasteaux Group. The culture is very similar to that of Dobu and Fergusson Island.

A man called Hehatori (Widiwidi village, Kelologeia district) gave me the following information on cannibalism.

" We went on the warpath against Gudumuri and we captured two men. Then we killed them with spear and club. We brought them back to the village. We roasted them and chopped them to pieces. The men who captured them do not eat them. When we kill a man we catch his spirit and roll it in a mat. It climbs up a tree in the village and becomes our guardian (' *to geba*=keeper '). It announces war or death."

The text is more like Dobuan and differs from the language of Sipupu, Boasitoroba and other Duau dialects. The beliefs expressed are also different and are more like those of real head-hunting areas; for example, the ghost of the victim becomes the special protector of the murderer. They eat the body and the spirit is their prisoner. They roast a man like a pig but it is better than pig. It is usually given to the wife's clan as part of the regular exchange of presents.

Another informant, Kauanamo, told me how he and his friends went to Boasitoroba to make war. He killed a man by spearing him in the *mons pubis*, but they could not eat him because they had to make their escape in order to evade being captured themselves. Another time they went to war against Guregureu (Loboda). They captured two women who were fishing at night. They " shouted them up," to Yaboaine as usual.[1] They splashed the water up, it fell down, which meant that Yaboaine had granted their wish. The taste of human flesh is one of the motives for war. If they had not eaten flesh for two or three months they usually started a raid. Human flesh is far superior to pork, but there are differences; the genitalia[2] are preferred, as also are the fingers and the arms, because they put scented leaves on their arms and that makes them taste good. If it is just an ordinary raid they kill them and then eat them. But if it is " *mebu* " revenge, they roast the victims alive because they do not want them to lose one drop of blood. So says Kauanamo, but this is a purely individual point of view since all raids are revenge expeditions.

[1] Cf. G. Róheim, " Yaboaine, a War God of Duau," *Oceania*, Vol. XVI, 1946, pp. 230-233, 320-336.

[2] Cf. R. Fortune, *Sorcerers of Dobu*, 1932, p. 302.

Doketa, another informant, had the right feeling for the psychology of his people. He said: "The whites are different. They fight and they make peace, but with us revenge never ends." The killer or the one who captures the enemy may not eat the flesh; that would make him a coward. The same taboo refers to children. It is believed that they will grow up weak and cowardly if their mothers have given them human flesh.

One old man whom I met at Fergusson by name of Geleitau of Begasi (Dovu) discussed the question, mainly from a gourmand's point of view. "Human flesh is very good for roasting. It smells very good. I have eaten sixteen people.[3] Anybody who has eaten human flesh will always want to repeat the experience. A man acquires a taste for it. Since he can only get what he wants in war, such a man becomes a *tay didiga:*, a formidable warrior. The finger used for scraping coconuts is the best part because it is fat like coconuts. The arm is good because people oil it and put sweet smelling leaves on it. The penis gets fat when it goes into the vagina and is good for this reason." All this he told me quite calmly just as if he were talking about any other kind of food.

Cannibalism involves raiding some other village. Usually the raiders go by canoe in order to surprise those who may be gathering shells on the sea shore. Bilaki, a man of Mwatebu district, related how he and his friends manned two war canoes at Pokitaj and caught a man at Uama, but he turned out to be a man of their own totem. One-half of the village (the in-laws) ate him, while those who were of his own totem sat in the *bubura* (fenced off place) mourning for him.

Cannibalism also occurs incidentally during a real war.[4] Tomekara of Baositoroba relates how the Sipupu hamlet was once attacked by a coalition formed of Lomitawa, Mwaruata, Bwatete and Sigasiga.

"They chased us from Sipupu to Boasitoroba. One group was *lasagita* (charge, frontal attack), another *haupa* (ambush). They speared only one man (Pwerio), but those in ambush shouted:

Nahanahami ibadi wataeya beno garewa koina
Your sides grow you fly that sky into it

that is, "you can't escape unless you have wings to fly away with. We were *uwauwa* (mad, crazy)! We ran and defæcated into our trousers." The whole raiding party went berserk. They caught and ate Bwadeya "because he did not listen to the advice of the old people."

Weyoko, a widow of Nedukarena (part of Sipupu) remembers how they ended the mourning for her father by killing a man from Lomitawa and eating him. She ate some of it. They caught him and tied his hands as if he were about to be crucified. Then they set a fire under him and roasted him alive. They all drank some of the blood. They kept the head in the house as a trophy but some pieces were given to other villages. A *bagi* was offered for a leg; a *mwari* for an arm, thus cannibalism appears to be a trait of the *une* complex.

In general the situation at Duau was that all "bush people" were the enemies of the "shore people" so that the bush villages of Boasitoroba and Sipupu also sided with the Lomitawa.

---

[3] This means he has shared in eating sixteen.

[4] Not a raid for human flesh.

Sasara is the word for a fight that breaks out suddenly, on an impulse. A Donakiya man (village in Sipupu) was attacked and killed in just such a fight by the Lomitawa. He was Ramoramo's cross-cousin (*nibaina*). They made a song about this.

Wari (Song)

Dayaru kana	*mudu*	*taga*
D. (name) her	navel	dropped
Mwanene	*kainega*	*inao*
Her husband	from his leg	she walks
Tamana	*quayaquaya*	*ina*
Father	dead man	his
Kahaguya	*yaragunaya*	
In my mouth	I put it in (genitalia).	

Dayaru's husband was roasted at Donakiya. When they were cutting the body up on the mat in order not to lose a drop of blood because it was *mebu*,[5] Dayaru went to urinate and accidentally stepped over her husband's corpse. Dayaru's father's people got the body because Dayaru's father had been killed by the Lomitawa. The woman (Dayaru) was not killed because she was also related to the people of Boasitoroba. Some of the Sigasiga people who were really bush dwellers, therefore allied of the Lomitawa, caught a man and refused to ransom him for *dona*.[6]

Manibusi	*sisilaeya*	
Bush people	their killing	
Geyobu	*watunagageya*	
(Name)	your exchange	
Kabailesi	*kana*	*dona*
(Woman's name)	her	dona
Ikakekake		*komwaney*
She gives gives		they put back.

She offered the *dona* as ransom for her husband Geyobu but the bush people refused. The song made the people Sigsaiga (i.e., the shore dwellers) so angry that they killed five bush people in revenge.

Bulema describes the customs of his father's uncle's clan. It seems to be true because it is authenticated by an incantation. These people used to invite members of their own totem clan (but of another village) and then tell their wives to get the vegetables ready. They would then kill their guests and eat them. In order to be able to do this, they would make magic " on themselves " or on each other. This is the incantation.

The Turning of the Stomach.

Dadabwa snake of Suaray hill
In the gully of Bwebweso
That is where you live
The East Wind blows

[5] The event mentioned above is evidently the cause of the revenge, for the song refers to (*Mebu* = revenge).

[6] *Kune* object. Goes with the *mwari*.

It makes your stomach muddy
We cut the *gahagaha* bush (used for fishing rods)
It makes your stomach muddy
You forgot your relatives
Your stomach becomes muddy.

Their mind " slips off " their relatives and the incantation eliminates the inhibition about eating relatives.

There is a legend about a big famine when parents killed their own children and exchanged them for the children of others to have something to eat.

According to one story, war originated owing to flesh hunger (*mwamwa*) of a woman. She wanted to eat a man, so the men got ready for war against Dobu. They made a war canoe called *koya-boborie*. The younger boys guarded the war canoe at Karokaro, whilst the men fought at Dobu. What the outcome was is not reported.

Koya boborie
Hill break.

Wari (Song).

Widow[7] became flesh hungry
They tried to fish on the island.

Kogisi of Guregureu has the following to say about cannibalism :

" My grandfather killed a Bwasidabwa man. From canoe they came. They went in ambush. He killed him. They chased him. They went down to the sea. They beat the drum, put the shirt on and got ready for the *besa*. At the end they shouted up[8] O Yaboaine ! O weak ones ! They are coming up. I kill and I shall always kill."

I have discussed the psychology of this " shouting up to Yaboaine " in another paper.[9] The captors dance the *besa* in all their finery and wearing a skirt. They sing songs at the *besa*. When they come to the village they roast the captive. The *bagis* obtained for human flesh then go round in the *une*. The *bagi* is *pokara* (demanding present) for human flesh. For a *mwari* they give a breast, for a *dona* an arm, for a *bagi* a leg, for a *mwahuhu* (nose bone) a head, for a *pareresaru* (stone axe) a neck. People who have no *une* object ask for just a little bit.

Bawe garana (Pig/bad) *tau ikamuna* (man/better) *tama hay* (our smell)[10] *kadji huyowana* (our happiness). However, the killer must not eat of the captive, otherwise he will never kill anymore,[11] " his foot would always be tired." The method of killing I have described before. Two poles, a cross stick and the captive tied to the cross-stick but moving between the two poles at each of which there is a fire. This way he runs up and down and roasts himself. His spirit goes up to Yaboaine or becomes Yaboaine.

---

[7] I.e., she will be a widow if the men die in the battle.

[8] They shouted up " their weakness."

[9] Róheim, " Yaboaine, a War God of Duau," *Oceania*, Vol. XVI, pp. 210-233, 319-336.

[10] This explains why it is so good.

[11] They do not differentiate between killing and making captive.

The last case of cannibalism in Normanby Island must have occurred about ten years before my stay there, i.e. about 1920. To-Dumoreya, a man of Moramoraha, went with his granddaughter to Lomitawa. This person was *gagasa*, i.e. proud, overbearing. He was on a visit to his relatives. They killed him and roasted him in a cave, then they hid the skull because they were afraid of the Government.

The psychology of cannibalism would not be complete without mentioning the disease they call *rara* or blood.

On our way back from a *sagari* or food distribution ceremony, we found most of the people of Sipupu outside the village, on the seashore, huddled together, wailing. What was it? A man was dead. He was not really dead but he had the *rara* which was as good as dead. "If we get this sickness, our belly gets very big and the body is all pain. It comes from eating our enemies' food." The belief is that if they eat food in a village where a member of their totem clan has been eaten they get "blood" and die of it. The man's name was Taisanina and his back was full of worms. His son and an old woman were in the house with him. They wouldn't let him out of the house because then he would run into the bush. He had good reason to do this because they intended to bury him alive, "because of the bad smell." No member of his totem clan went near him because of the belief that his "life" (and probably the disease) would pass into them and he would die immediately (i.e., they could not bury him alive). A person with this disease is considered "dead" because they say, "Sometimes they get white and thin and yet they go on talking *as if they were alive.*" He complained, "I have been sick. I neglected my garden, now someone else will eat the yams."

The ghost of such people comes out of the grave and throws stones at the houses. The disease may also come out of the grave and spread. These ghosts look like fire or the moon. They are supposed to set fire to the village and to come back in less than six weeks after the burial. If the ghost finds a member of his own clan in the village he embraces him (or her) and they get the disease from the smell. These ghosts don't go to Bwebweso. They always walk about in the bush. If anybody goes near their graves they throw stones at them. The people of Taisanina's own clan ran away. The mourners were his son, brother-in-law, etc., i.e. "line relatives" or *rabaraba.*

In olden times when they noticed signs of this disease, the relatives would send a stranger to the "*rara*" person to ask him: "Will you be buried now?" He usually consented. They would take him by the hand, walk into the bush with him and then tell him to sit down. Then they would dig the grave. Then they took two trees (*quarauto* and *kekura*) and broke off the branches of these trees and put them into the grave. They told the man to go down into his grave and then they would bury him. The leaves of these trees prevent the sickness from coming out. Often the men who buried him would get angry and say, "You go to your relatives and kill them quick! They got angry because of the smell."

Sawaria was the name of a man who had the *rara.* He made an incantation to kill his relatives quickly. If they dreamt that fire had burnt their house, they had the disease. The name of the disease was *ikaika,* meaning "hot." The same disease would also visit those who ate either their own totem or the totem of their father.

Tubuyay does not eat *bwayobwayo* (owl) because that is his own totem, *gewara* (cockatoo) because that is his father's totem, and *wakeke* (white cockatoo) because that is his grand-

father's totem. Toa Kaura does not eat *magisub* (eagle), which is his own totem, nor *bwayobwayo*, which is his mother's father's totem.

The *rara* is also the punishment for naming relatives who should not be named, but in this case the taboo applies to the patrilineal relatives. Instead of *imwawasa* (dead) they say *ikabi muya* (got sick). Opinions differed. At Tanihana they said it was taboo to mention the dead, but Tubuyay said the taboo was only upon hearing the father's name or upon talking about the dead. If a man says "*tamagu imwawasa*" ("my father is dead") that means that he has *barau'd*, i.e. killed by sorcery, his own father. Besides being affected with the *rara*, their eyes get blurred. The latter is also the punishment if they see an octopus or a *quadoya* (opossum).

These people have a very curious way of committing suicide (*isiwapa*). They have the usual method of hanging themselves, but the more orthodox way is to walk into a village that is at enmity with one's own village and declare that one is ready to be eaten by them. Any friendless stranger is killed and eaten and in pre-white times villages were either in *kune* relationship with each other or at war, that is mutually raiding each other for people whom they might capture and eat.

According to Tomoire of Delina, a village of Fergusson Island, this is the origin of the *kune*.

In olden times, a man called Mataudowa made a present of a *mwari*[12] to his in-law because he wanted him to work for him. His in-law felt insulted by the way this was done and he cut a *bagi* (red shell string) to pieces and defæcated into a coconut. He ate it all, *bagi*, fæces and coconut. He then went to the enemy, to the people of Gureya village. They captured him and he said that if they ate him, they would find five *bagi* in his belly.

Cannibalism occurs also in dreams, either in the text or as an association.

Bulema's Dream.

Dimdim sihoyo gau kotogu sikupweya buraku koinega Sikuhegau ma
Whites they tied me my neck they cut it block from it They pulled me up and
kebekupwa sisisige koina yarugu Siesilagili. kotogu ikupweya
cutting thing like scissors into it I went in. They made it move my neck it cut.
Ma hohogu sikaharia blanket koinega siwadugaua karilearia.
And my body they carried blanket in it they made a bundle of me grave.

Associations.

(1) The grave. It was a round hole. Bebe made a grave like that for his elder brother. The brother was killed by a *barau* because of his *sagari* and *kune*.

(2) The blanket. He and other working boys buried a white man at Bwasilaki in a blanket. This white man used to hit the boys on the head when they were slow, but he was friends with the dreamer. They used to go shooting together. He did not make love to the native women. Bulema was sorry when he died.

(3) The block. This reminds him of the way the Quatu mission loaded its cattle on to the boat.

[12] White shells circulated in the trade exchange.

(4) The cutting implement or scissors. The boys killed a white man at Ubuya and one at Woodlark. They were executed with some kind of knife.[13] The white men were bad. They refused to pay the boys.

(5) The white man who ties him. He wears a blue coat like a policeman. His face is like a white man. He wears a red hat. Soldiers wear red hats. The figure is like Papu, a big, tall Samoan missionary. Last week he gave Papu seeds to plant. Once, when he went for a *sagari* with a mission teacher named Yoeli, the teacher said: "Don't eat the pig they gave you, it is too fat. We shall get another for you."

(6) Peter. The white man mentioned above. He was like Nekelesi (Nicholas). When he came, his boys went ashore to fetch his wife. Then he opened her skirt and if the vulva was wet he beat the boys with an axe. He was fined so often by the Government that he became bankrupt. He shot some men dead at Dobu because they refused to give him bananas. Many natives used to be like that. There was a man called Damoita at Weyoko. He married a girl who lived in his sister's village, his *eyena*.[14] He had a little garden and his garden continued to bring forth when the great famine devastated other gardens. People came there to steal his yams. He killed them, roasted them in an earth-oven and ate them.

"Once when I was a little boy I lived with my uncle at Kelologea. A relative named Moreiway said: "Let us go to Sawatupwa to catch crabs near the river. Moreiway saw a fisherman and he killed him with a spear, but he did not eat him because "the village was too close."[15] Moreiway told me not to tell anybody. We said the crocodile had killed the man. I have never told anyone. This is the first time I tell this story."

Before relating this dream Bulema said, "Don't mention my name," i.e. forget about me because you are leaving and my heart aches. This was towards the end of our stay at Sipupu.

Interpretation.

Bulema is sad because we are leaving. This means an oral frustration for him. He could always ask for tobacco, rice or canned meat at our house, and now he is going to be deprived of all this. He is *gamwasoara*, a word which in their language means both sad and angry. This is not merely a linguistic phrase, for they actually looked angry when we left. The dream is all about white men or people associated with the Mission, i.e. about the writer.

Moreover, we know something about Bulema. He is a *barau* on the basis of his counter-phobic attitude or identification. He suffered from nightmares in which the *barau* were killing him. We can therefore safely conjecture that if he is being killed by white men that means that he wants to kill a white man (the writer). The last story he relates makes his guilty feeling quite clear. He participated in a killing, and almost ate the victim.[16] He never told anybody. He is now *confessing* to me. He would really be in trouble if I told the Government.

The white men in the dream are both good and bad, yet more bad than good. His first description of Peter evidently refers to his friendship with the writer, but the second story

[13] Obviously a fable.

[14] In-law relations of brother, uncle or cousin.

[15] I.e., the totem birds of the villages were allies. Cf. G. Róheim, "Totemism in Normanby Island," MANKIND, Vol. IV, 1950, pp. 189-195.

[16] He may not be telling the whole truth. Indeed it is more likely that they actually ate the man. A crocodile could hardly be held responsible for a corpse with a spear wound.

about the same man goes much deeper. Then he goes on to tell the story of a famous cannibal who gave people food and then ate them. The writer has been giving him food. In the future there will be frustration. He can't " eat " ; he is being eaten. The block was the place where the cattle were shipped on to the boat. He would like to sail with me. This does not explain the cutting apparatus in which he has his neck. Obviously " being eaten " here means being castrated, as we shall see below when we interpret cannibalism in the context of Duau culture.

We can now attempt an interpretation of the whole complex of cannibalism in this culture. In the beliefs of the people of Duau the witch is the typical man-eater. Witches eat corpses, they wreck canoes and eat the inmates. Witches are called " our mothers " and these people have a sharp weaning trauma and a systematically interrupted nursing period.[17]

However, there is also another " oral trauma " and this comes from the father. It is customary for the father to kiss and bite the penis or the vulva of small babies and children, saying, " I bite it off ! " or something similar. Here we have a combination of oral deprivation, genital stimulation and castration as in Bulema's dream. The deprivation he suffers is certainly oral (tobacco, etc.) but the writer is also a father figure and therefore we have a repetition of the maternal trauma. The chief representative of these paternal man-eaters is *Tokedu Keketai* (the eater of men) who, however, belongs more to the realm of folk-lore and myth than to that of actual belief. Nevertheless he sometimes figures as an actually dreaded demon.

A man called Daguyay dreamt about Tokedu Keketai.

Yaeno ta yatauya ta Tokedu Keketai maiyagu aelobaloba ga ina keweliweli

I sleep and I went and Man Eater with me we met and this stick (club)

iurena ga imema Aboagu yatautauya ga aene ida unugu ga yahaboena

he carried and he came I went and wanted me to kill and I pretended

kedewa yabwanyena itooro ga iyasanaira ga itauya.

dog I called he stood and he turned back and he went.

" Next day I went to the garden with my dog and I saw Tokedu Keketay. A very tall man, with a club, with people's bones and skulls. His skin was swelling like the knobs on a tree-trunk or like stones sticking out of a body. His head was long and narrow, his eyes were in the vertical position as if they had been cut open, his hair standing on end. He was coming towards me. If it had not been for the dog I should have been sick after this meeting."

The phallic nature of the apparition where everything is standing and vertical is quite clear. In a myth I discussed in the " Riddle of the Sphinx," *Tokedu Keketai* is the father figure, killed by the Duau Oedipus, *Matakapotaiataia*.[18] In some of my unpublished stories he eats his own children.

The most outstanding thing about cannibalism in Duau is that the victim becomes a *Yaboaine*, the representative of the super-ego.[19] In another form of the belief, the victim is a protecting spirit of the murderer. The whole face-saving structure of the culture is bound

[17] Cf. Róheim, " Witches of Normanby Island," *Oceania*, Vol. XVIII, 1948, pp. 280-308. *Idem*, *Psychoanalysis and Anthropology*, 1950, p. 156.

[18] Róheim, *The Riddle of the Sphinx*, London, 1934, p. 179.

[19] Róheim, " Yaboaine," *loc. cit.*

up with cannibalism. To bring a victim home, especially a " beautiful " one increases one's prestige, but also causes guilt feelings. It is an attempt to ward off the super-ego and provokes renewed attacks of the super-ego. If we consider it as part of the *kune* complex, we come to the same conclusion. The super-ego (aggression turned inward) aspect is quite clear in the case of the *isiwapa*, the people who are so offended that they offer themselves as food, and in the belief that the killer may not participate in the meal or he would be weak and anxious. Moreover, the *rara*, a fatal disease, is acquired by eating food in a village in which the blood of a relative has been shed, i.e. by an indirect eating of the relative. If we add to this that relatives are those of one *susu* (breast) the matter is even clearer. We must assume the following process in the development of Duau cannibalism, (*a*) the oral frustration, (*b*) aggression (body destruction phantasies) in response to frustration, (*c*) talio anxiety, the cannibal witch, (*d*) denial of anxiety, counter-phobic attitude—" we are cannibals ourselves," (*e*) anxiety, guilt mobilized by (*d*), bravado of the great warrior, the *tay didiga* (frightening man) against (*e*). Thus we have the same " boasting modesty " pattern that is so characteristic of this culture.

I record the following story, told by some informants from Dobu. It does not appear in Dr. Bromilow's book and therefore it is probably a legend, but none the less characteristic of the whole complex. Dr. Bromilow had a denture, hence his native name of *Sara-gigi* (teeth out). He put an end to the cannibal raids by pulling his denture out and telling his awe-struck audience, " this is what will happen to your teeth if you don't stop eating people."

GÉZA RÓHEIM.

Polynesia : Dietetics. **Turbott.**

The Value and Importance of Portulaca as a Native Food in the Phoenix Islands, Central Pacific.

By I. G. Turbott, Colonial Administration, Tarawa, Central Gilbert Islands.

In the Phoenix Islands on Manra Island, Orona and Nikumaroro, natives from the Gilbert Islands have built their homes under a Government sponsored settlement scheme. Mr. H. E. Maude, O.B.E., in an article " The Colonization of the Phoenix Islands," which appeared in Vol. 61, Nos. 1 and 2, of the *Journal of the Polynesian Society*, with typical thoroughness, described the Settlement Scheme which he had pioneered.[1]

During 1951–1952, I lived some six months on the three isolated outer Phoenix Islands which are part of an Administrative District of the Gilbert and Ellice Islands Colony. As a result of a detailed survey into the diets of their Gilbertese inhabitants, particularly on Manra and Orona Islands, and with the help of the Department of Scientific and Industrial Research in Wellington, N.Z., I now submit this article on the particular value of *portulaca* in the diet of the Phoenix Islands settlers, followed by a brief description of the methods by which it is prepared before eating.

At Manra Island, the land-locked lagoon is too salty for fish to live in. Reef fish, except at the places furthest from the settled area, are for the most part poisonous. Deep sea fish are hard to obtain owing to dangers from the fast currents which run almost continuously through the Phoenix Group. And even more important, the lagoon has apparently sunk

[1] Mr. Maude also described the settlement scheme in a lecture delivered before the Anthropological Society of N.S.W.

considerably from its old level, leaving many acres which subsequently were either planted with coconut or on which vegetation grew naturally. It is possible also that the salt from the lagoon has seeped into the coral atoll itself so that the normal Gilbertese diet plants, pandanus, " babai " (a large coarse Alocasia), bread fruit and small berried trees die or produce no fruit. Only the coconut grows adequately, and this even in a somewhat scraggly form. It was obvious therefore that on Manra and to a lesser extent on Orona and Nukimaroro (on the latter islands the lagoons are not land-locked, fish is abundant, and diet trees are growing slowly), the settlers from the Gilberts had found some new major food to augment their meagre diet. In a previous article, " Diets, Gilbert and Ellice Islands Colony," published in the *Journal of the Polynesian Society*, Vol. 58, No. 1, March, 1949, at p. 41 mention was made of the use of *portulaca* or " te boi " (Gilbertese translation) in the Phoenix more as an emergency food than as at present an essential part of the diet. Later figures for the amounts of food eaten on Manra will show the extent to which it is uow used.

Classification. The " te boi " or *portulaca* grows profusely on all three Phoenix Islands mentioned, also at Canton Island. It was from Canton Island that I collected fresh and dried samples of the plant and personally carried them to New Zealand by aeroplane. There arrangements had been made for immediate onward trasmission of the specimens to the Department of Scientific and Industrial Research in Wellington, N.Z., thus within a few hours they had travelled many thousands of miles. The Dominion laboratory of the Department of Scientific and Industrial Research acted at once and I am deeply grateful to them for their interest and for the complete analysis which they carried out. At the same time samples were sent to the Botany Division of the Department of Scientific and Industrial Research in Wellington.

The plant was at first referred to as *Portulaca—Canton Island.* Its description fits apparently, on first examination, that of *Portulaca oleracea* as given on p. 151 of " The Flora of the Malay Peninsula," London, Vol. 1, by H. N. Ridley (1922). Mr. Maude, in the article previously mentioned on the Colonization of the Phoenix Islands, refers to the use of this plant as follows : " A fleshy green pig weed or *boi* (*Sesuvium portulacastrum*) which was found to be an invaluable emergency food during the early days of settlement." I suggest that Mr. Maude received a wrong identification. *Sesuvium portulacastrum* has stems rooting at the nodes, petaloid sepals which are greenish outside, reddish within, and furnished with a small spur on the outer surface below the apex. Its seeds are smooth.

The *Portulaca—Canton Island*, on the other hand, grows to a height of six to 12 inches rather than purely a fleshy prostrate creeping plant, and has a yellow flower rather than the rose pink of the *Sesuvium portulacastrum* as described at p. 866 of Ridley's " The Flora of the Malay Peninsula."

After further detailed study, the Botany Division of the Department of Scientific and Industrial Research in Wellington, N.Z., stated it was almost certain that the specimens I had collected would be classified as *Portulaca lutea*. *Portulaca lutea* has stems not rooting at the nodes and fleshy roots. There are two sepals, much smaller than petals and green in colour. The petals are yellow, more or less notched at the top, with the margin forming a small apiculus. The seeds are stellately rugulose. This description fitted that of the Canton specimens, which in turn were similar to the *portulaca* on the other Phoenix Islands. It is further interesting to note that in a recent publication on the plants of Bikini (Marshall

Islands) that *Portulaca lutea* had been identified as the main species of *Portulaca* on Bikini and other northern Marshall Islands, a group some 400 miles to the north of the Gilberts. As in the Phoenix Islands, the *Portulaca* in the Msrahslls is found in " somewhat considerable patches in sterile open ground," and is described as " stout, with erect fleshy stems."

Analysis and Food Value. The last analysis of *Portulaca oleracea* available in New Zealand was dated as far back as 1887 and 1897.

The following is the analysis and brief report made on the samples which I carried from Canton Island by the Dominion Laboratory of the Department of Scientific and Industrial Research, Wellington, New Zealand. The analysis is dated 11th November, 1952.

" *Portulaca—Canton Island.*
(1) Fresh.
(2) Dried.

Analyses :		1	2
Water	..per cent.	86·5	16·1
Protein (NX 6·25) ..	.. „ „	1·03	5·2
Ash	.. „ „	1·9	11·0
Fat (either soluble extract)	.. „ „	0·2	1·0
Crude fibre	.. „ „	1·2	9·2
Ascorbic acid, mg./1009 ..	.. ..	10·0	3·3

The plant affords a reasonable supply of ascorbic acid, and this is probably its chief value as a food where other greens are lacking. The ascorbic acid content is approximately that of new potatoes and many other vegetables with the exception of the brassicas.

" Drying of the material causes loss of most of the ascorbic acid."

For immediate reference, and to illustrate the obvious value of the ascorbic acid or vitamin C element of *portulaca*, I would quote here an extract from an article on vitamins by A.H.N in *Encyclopaedia Britannica*, 14th edition, 1929.

" *Vitamin C* (*the Antiscorbutic Vitamin*). The cure for scurvy was long recognized to be fresh food but quantitative experiments have shown that the vitamin occurs in very varying proportions in different food materials. Its richest sources are green leaves, especially of the cabbage, the juice of citrus fruits (lemon, orange and grapefruit), the tomato and certain roots such as the swede turnip. On the other hand meat and milk, the potato and many vegetables and fruits usually only contain the vitamin in comparatively small amount. It is absent from seeds but is produced on germination (1912, Furst). Different animals vary greatly in their requirements of this vitamin. Thus guinea-pigs (250–300 g.) need 100–150 c.c of milk or 1·5 c.c. of orange juice or 1·5 grams of fresh cabbage per day, whilst monkeys, ten times their weight, require exactly the same ration ; rats, on the other hand, require extremely little and can exist for long periods without it.

" Of all the known vitamins, the antiscorbutic is the most readily inactivated by oxidation. This process is comparatively slow at air temperature but becomes very rapid when the temperature is raised. As a result of this large proportion of the antiscorbutic potency of food materials is lost when they are cooked or dried. On the process of canning there is less exposure to air and some canned articles, e.g. tomatoes, are still potent. Inactivation by oxidation is greatest in alkaline and least in acid solutions. On observance of air, materials

containing the vitamin may be heated to a comparatively high temperature without serious loss, especially in acid solution. On storage after this treatment, however, the potency disappears more rapidly than from the untreated materials."

The Actual Use of Portulaca in the Phoenix Islands. During 1950–51 the Phoenix Islands experienced one of the droughts which has proved to be a hazard of the settlement scheme. Small quantities only of European store food were available. The following are the average amounts of native food consumed on Manra Island:

In 1950:

(*a*) Adults:

Coconut toddy (fresh)	2½ pints per day
Fish	2½ lb. per week
Te boi (*portulaca*)	1½ lb. per week

(*b*) Children:

Coconut toddy (fresh)	1 pint per day
Fish	½–1 lb. per week
Te boi (*portulaca*)	¼–½ lb. per week

In 1951:

(*a*) Adults:

Coconut toddy (fresh)	3 pints per day
Fish	2½ lb. per week
Coconuts	10 nuts per week
Te boi (*portulaca*)	2–2½ lb. per week

(*b*) Children:

Coconut toddy (fresh)	1½ pints per day
Fish	2½ lb. per week
Coconuts	2–5 per week
Te boi (*portulaca*)	½–¾ lb. per week.

In 1950 the rainfall was 6·05 inches, in 1951, 30·96 inches.

In spite of the apparently very meagre diet, when all the Manra and Orona people were medically examined by a native assistant medical practitioner in 1951 he found them to be remarkably free from disease. *Portulaca* is generally not given to sick people, as it is considered too strong a food. Babies likewise do not eat it, but it is given to young children in reduced quantities as soon as they start to walk.

When the Gilbertese first came to the Phoenix and because of their restricted diet they began eating *portulaca* in quantity. They did not like the taste at first. Many felt like vomiting after their first substantial meal of it, but after a few days they report that the taste "grew on them" until they liked it and indeed craved for it. There really is no particular taste to *portulaca*. In the food mixtures described later, it is the toddy, etc., mixed with it which is tasted. There is no smell.

If too much "*te boi*" is introduced to the diet, the stomach swells and there is muscular wasting. But eaten as above, "*te boi*" is a soothing food and from reports of assistant medical practitioners who have lived long periods in the Phoenix, it prevents constipation and indigestion. It does produce much borborygmi.

In the Gilberts, "*te boi*" grows in lesser quantity and is used as an emergency drought food only.

The "*te boi*" or *portulaca* grows profusely on the stony back part of the Phoenix Islands where the coconut tree has not yet been planted. The land is mostly covered with scrub, with bare patches between where the *portulaca* grows to a height of one or possibly two feet. The Gilbertese break off only the outer stems of the plant, thus allowing the plant to keep alive. As is seen from the figures for the amount of food eaten, in 1950, the reason for less *portulaca* being eaten was that it was harder to obtain. In 1951 with more rains the plant grew quicker and supplies were increased. Drought did not cause the *portulaca* to die out. Its growth was merely retarded.

Method of Collection

The Gilbertese go by canoe across the lagoon, or by foot around the island to the rougher undeveloped back country to collect their supplies of *portulaca*. Usually the whole family goes with woven baskets and collects sufficient for the rest of the week. The women do the actual collecting, the males sailing the canoe or reef fishing during the collection. On return to the village much of the *portulaca* is prepared immediately; some is left for to-morrow's meal and some dried for future use.

The methods of preparation are:

(1) On Manra Island.

A. for eating stem (the part generally eaten).

Method (*a*). First the stem is broken into 6 to 8 inch pieces, dropped into hot or boiling water and cooked until the fleshy stem is soft. The skin is then peeled off and the remainder mixed with fresh toddy, molasses made from coconut juice, plus a little grated coconut if available. The mixture is either a semi-thick paste or watery paste. Eaten in this form it is known to the Gilbertese as "te Katoka."

Method (*b*). Scrape the skin off the stem while it is raw, then boil in water until soft; grind it and mix with the same ingredients as above. From experience, the Gilbertese find this the easiest method of preparation.

Method (*c*). Scrape the skin off the stem while it is raw, then cut into very small pieces, wash thoroughly with sea-water. Boil until soft, add coconut milk and a small amount of flour and/or molasses if available. While adding the flour and coconut milk, the mixture must be thoroughly stirred until the flour is properly cooked. The mixture can be prepared and eaten just as well without the addition of flour, but to the Gilbertese palate the addition of flour is an advantage. The initial thorough washing prevents the final product from being sticky and is thus easier to eat.

Method (*d*). Scrape the skin off the stem while raw, cut into small pieces, and boil slowly until quite soft. The soupy result is then drunk just as a soup, i.e. liquid and body are eaten.

Method (*e*). The "*te boi*" is first soaked, then boiled until soft. The cooked stems are then ground thoroughly, mixed with coconut milk and grated coconut. This mixture is put aside. Molasses is then boiled by itself until

it becomes thick. The "*te boi*" mixture plus a little flour if available, is then poured into the concentrated molasses while still on the fire, and this is stirred until it becomes almost solid. The resultant browning mixture is then cooled down, rolled into pieces about the size of a cricket ball. This *portulaca* preparation is very popular on Manra Island with the Gilbertese adult. But it is so sweet and hard it is not given to the young children as reports indicate that it causes their stomachs to swell, resulting in diarrhoea

B. *Methods of Preparation of Dry Portulaca.* The skin is peeled off the stem either before or after boiling. The stems are boiled until soil then spread in the sun until absolutely dry. The dried product will keep for many years if stored in a dry place—generally in woven baskets suspended from the rafters of eating houses.

C. *Methods of Preparation of Leaves of "Te boi."* The fleshy xerophitic leaves are picked, boiled, and the sticky resultant mixture squeezed through several changes of fresh water in order to remove all the salty taste. Then it is pounded and mixed with grated coconut, fresh toddy or molasses and eaten as a paste.

(2) *On Orona Island.* The methods of preparation are the same as on Manra, with these variations, all of which are also used to a lesser degree at Manra :

(*a*) Scrape off the skin of the stem, boil it in fresh water, or dry bake it in a Gilbertese oven until cooked. It is then pounded with a wooden native mallet, mixed with grated coconut and toddy to a thick or thin watery paste according to taste.

(*b*) To prepare a dry "*te boi*" or *portulaca*.

(i) Boil stems until soft, grind thoroughly and mix with molasses until a semi-solid mixture results. Boil again, stirring vigorously while on the fire. If the mixture becomes too solid, add more molasses ; after several boilings, remove from fire and cool. When lukewarm, spread out to a thickness of 1/6th to 1/4 inch on leaves. Leave until absolutely dry. In this state it can be stored for many months. The Gilbertese on Orona call this mixture " te tuae." In the Gilberts " te tuae " is a thick pandanus fruit base. The " te tuae " with a *portulaca* base is identical in appearance, and it is no doubt the memories of eating " te tuae " in the Gilberts which has resulted in the Phoenix Island settlement naming the nearest equivalent food by the same name.

(ii) Another dried *portulaca* is made by scraping off the skin from the stem, boil only until cooked, then spread out in the sun for two or three days until almost brittle and quite dry. This may be stored in this state for many months.

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I. G. Turbott.

Australia: Social Anthropology. **Berndt.**

A Selection of Children's Songs from Ooldea, W. South Australia. *By Ronald and Catherine Berndt, Department of Anthropology, University of Sydney.* (*Continued from Vol. IV, No.* 10.)

Astronomical.

(100) *'mundu:nu:*(*a*) *'rata:'rata:* *'mundu:nu:* *'rari:'rari:*
moon hit with stone moon swaggering (or lurching).

Note.—(*a*) Usually *'bi:ra* (or *'bera*).

Explanation. A man tries to hit the moon with a stone; the brightness of the moon (probably when full) has affected him, causing him to become light-headed and swagger about. This may be compared with the state which we term "moon-struck"; the feeling of stupefication for the native may extend over a period of one to several days. No other examples were recorded during our period of work in the area.

(101) *'kandaŋa 'daru:'aruŋu: 'munaŋga:* *'gilbaŋa:!*
star falling down at night-time(*a*) you (star) go back!

Note.—(*a*) Or *'muŋaŋga.*

Explanation. A falling star (australite) at night. You, star, go back to the place from which you have come!

It is said by some informants that a shooting star is a *'ma:mu*, while others hold that it contains the spirit of *'Wɔnambi*—the latter belief is substantiated in the sacred mythology. It might be said that the former conception is the secular and is common among boys.

Reference to the European.

(102) *'bi:la: 'dalga:'dalga: 'wi:nu: 'ŋarala: 'wɔnana: 'bu:ju:wara:*
spinifex hard straight stand up follow on "smoke/fellow"(*a*)
'bu:ju:wara: 'ŋarala: 'wɔnana:
"smoke/fellow" stand up follow on.

Note.—(*a*) A *'bu:ju:wara* is a white man; he is compared to billowing white smoke.

Explanation. This song most probably refers to a white man who penetrated into the Spinifex in the early days of settlement on the fringe of the Desert.

Mention of Physiographical Features or Artificial Constructions.

(103) *'wanpa:'pəri: 'ʒa:lu:'damu:*(*a*) *'wanpa:'pəri:*
a long way big tree/a dam(*b*) a long way.

Notes.—(*a*) Derived from the English word dam; probably transposed from the native *'tanmurba.*

(*b*) A dam in the native sense is a construction or barrier across a creek, made from boughs, stones and mud. Such a dam, if it is shaded by trees and bushes or a hollow with overhanging rock, conserves the water for a considerable period.

Explanation. A long way away is a big tree; there is a dam.

(104) *'logarinbi: 'logarinbina: 'la:ga:'rungu:*
bark of tree bark of tree clay-pan(*a*) (or lake).

Note.—(*a*) A clay-pan, *'pi:na* ; *'La:ga:'rungu:* is a particular name for the lake or clay-pan.

Explanation. The song tells that there is tree bark at *'La:ga:'rungu:*.

Miscellaneous.

(105) *'burdəri: 'lɔr 'wa:ru: 'ŋarata: 'wadi:'ga:diŋi:*
(*a*) go around/fire long way away man/going further away.

Note.—(*a*) Meaning " to blow out air through the mouth, lips rounded and protruding."

Explanation. The meaning of this song is not apparent. The man *'burdəri's* with his mouth, going around the fire ; then he goes a long way away.

(106) *'gauredi: 'djara: 'dji:duŋ'guru: 'gauredi:*
a little twig (*a*) carrying a blanket on the shoulders/a little twig *'dji:duŋ'guru:*
carrying a blanket on the shoulders.

Note.—(*a*) Walking with feet turned outwards, at right angles ; not to be confused with *'dja:ra* (sometimes *'djara*) a shield.

Explanation. No explanation as to the meaning of this song was given.

(107) *'ba:rga: 'jedi:'ga:di: 'tjeŋemba:*
a twig or stick draw lines on the sand a species of small tree/ *'wilbu:bu:'bu:wa:*
hit him.

Explanation. A boy draws a design with a twig upon the sand near a *'tjeŋemba* tree. Someone comes along and hits the drawer.

(108) *'bida:ra:*(*a*) *'wi:a: 'ŋara:*(*b*) *'tjendu:*(*c*) *' za:li:*
go away finished stand up sun close up.

Notes.—(*a*) Or *'bida:la.*
(*b*) Or *'ŋarala.*
(*c*) Also *'djindu.*

Explanation. A person stands up to go away, he is finished (whatever he had to do). The " sun is close up "—i.e. going down in the west.

(109) *'ði:ði: 'gu:lunba: 'tu:ni: 'ju:rumba: ' zela:'reli: 'balɔ:r'dəri:*
boy little stomach full acacia leaves cover it up with the hands.

Explanation. The little boy's stomach is full ; he puts acacia leaves upon it and covers them with his hands.

This may be done to ease the uncomfortable feeling of having eaten too much.

(110) *'ŋarala: 'ɳaŋa:ni: 'na:ba:ri: 'ba:reŋu:'ba:reŋu:*
stand up look big tree long way off.

Explanation. A person stands up, looks and sees in the distance a big tree.

(111) *'tjeri:'bidi: 'ma:ri: 'gulaŋu: 'tjeri:'bidi:*
song hand behind song.

Explanation. The informant did not know the meaning of this song.

(112) *'walu:'turanti: 'turanti: 'gilbaŋgu: 'gilbaŋgu:*
big stones/put them/on ground go back north.

Explanation. This may possibly be a corruption of a mythological song; its significance is not known.

(113) *'wi: 'tjendu: 'tjundala: 'wari:lura: 'bandana:*
stop sun big clouds over sun bush having large leaves thigh
'kaka:'laru: 'kaka:'laru:
go slowly when walking.

Explanation. The sun " is stopped " ; large clouds cover its light. The singer brushes against the *'wari'lura* with his thigh and walks away.

(114) *'kanda: 'wara:la: 'jilbu:'lulu: 'wariŋ . 'ka:ru:*
chin pointed throw sand with the hand go around big creek
'jilbu:'lulu: 'kanda:'wara:la:
throw sand with the hand/chin/pointed.

Explanation. The meaning of this song is obscure. *'kanda'wara:la* refers to a pointed chin, probably a beard ; while sand is thrown with the hand and the singer goes around the bend of a creek. The " throwing of sand " is used as a sign to tell others what direction to take.

(115) *'djenda:'djenda: 'waŋa:ru: 'waŋa:ru:*
piece of broken stick spinifex.

Explanation. This is a song about a piece of broken stick out in the Spinifex country.

(116) *'talumbi: 'talumbi:*(*a*) *'tandji:na: 'tandji:*
walking slowly touching.

Note.—(*a*) The use of the second *'talumbi* accentuates the slowness, meaning " very slow."

Explanation. One is walking very slowly and touches another person.

(117) *'gadidji: 'wɔga:'wɔga: min'milidji 'wɔga:'wɔga: 'gadidji: 'wɔga:'wɔga:*
teeth speak to him nipples (male) speak to him teeth speak to him.

Explanation. The informant was not able to explain the meaning of this song.

(118) *'θalga: 'θalga: 'ŋaraŋu: 'wi:rinbəri: 'gada:'nela: 'ŋaraŋu:*
(*a*) stand up dry clay-pan(*b*) son/goes away stand up.

Notes.—(*a*) A straight stick or spear ; sometimes *'ḍalga.*
(*b*) Lit. " empty clay-pan."

Explanation. A straight stick stands up in the dry clay-pan ; a son sees it and goes away.

The stick is probably used as a warning, and he who sees it must go away from the forbidden place (i.e. where sacred objects, boards, etc., are hidden).

(119) *'baba: 'ŋurila:'ŋurila: 'nju:rilba: 'i:luŋu:*
dog finds them the centre boy/dead.

Explanation. This song refers to some children who were lost in the bush ; a dog finds them, the " middle " boy being dead.

(120) *'walu: 'ŋa:rada: 'bidjina: 'jaŋuna: 'bidja:ŋadju: 'mula: 'ŋuldi:*
round stone/bushes (*a*) go away to a far-distant place nose (*b*)
'ka:diŋu:
take him away.

Notes.—(*a*) Referring to the act of bending one's head while looking closely on the ground, at the same time picking up small objects such as edible seeds or quartzite flints.

(*b*) Pressing one's nose to the side of the face.

Explanation. The first part may refer to the picking up of edible seeds of the *'ŋa:rada*, and the *'walu*, the grinding-stone. The meaning of the latter part is not clear ; *'mula* refers to *'ŋuldi*.

(121) *'tjigeila: 'daruŋu:'daruŋu: 'tjigeila:*
sharpened sticks/soft clay sharpened sticks.

Explanation. The song refers to sharpened sticks being stuck in the soft clay. The reason for this is not known.

(122) *'djendja:'djendja: 'wala:lu:*(*a*) *'mara: 'djendja:'djendja:*
tie up going behind/hand tie up
'wanba:'ni:la: 'wala:lu: 'mari:
an old woman soon to die/walk quickly(*a*) pick it up.

Note.—(*a*) The word *'wala:lu* has two meanings.

Explanation. An old woman ties up a bundle, goes behind a bush, then picks it up and walks away.

(123) *'tjunda: 'ma:li: 'bembulu:lu: 'kadidi: 'tjunda:*
upon the thigh he hits the child a trap-door spider teeth upon the thigh
'ma:li: 'kanda:wara:(*a*) *'ga:di:*
he hits the child pearl-shell ornament take him away.

Note.—(*a*) Also *'ga:raba* (or *'ka:raba*).

Explanation. A child is hit on the thigh. The meaning of the latter part of the song was not known by the informant.

(124) *'mudju: zin 'bal-lalin 'gunda:'wara: 'gunda:'wara: 'mudju: zin 'bal-lalin*
end of spine bush chin chin end of spine bush.

Explanation. No meaning of this song was available.

(125) *'djindu:'guda: 'djindu:'guda: 'bara:'barada: 'danba:'ruŋun*
morning time morning time a long way hit his leg.

Explanation. It is morning, the man has a long way to go—but he hit his leg against something.

(126) *'ŋinbidəri: 'ŋinbidəri: 'wɔŋa: 'gaduŋa: mai'a:li:'buŋa: 'ŋinbidəri: 'ŋinbidəri:*
eye-lash eye-lash creek very high hit the ground eye-lash eye-lash.

Explanation. The informant did not know the meaning of this song.

(127) *'galalana: 'tju:ruŋa: 'da:ri:'mana: 'tju:ruŋa:*
dinnertime walking as an old man to try/get him/walking as an old man
'da:ri:'mana: !
to try/get him !

Explanation. At dinner-time, that man walking as if he were old. Try and get him !

(128*a*) *'gala:'galaralu: 'dali:ə'manu: 'dina:*
dinner-time to gather together and lift/a big man
'gandra:'a:lu: 'dali:ə'manu: 'gala:'galaralu:
stamping with one's foot once to gather together and lift dinner-time.

Explanation. A big man gathers together food and lifts it, taking it to the fire for dinner. He stamps on the ground with one foot.

(128*b*) *'belba: 'gandra:'a:lu:*
dragging a stick along the sand stamping with one's foot once
'dali:ə'manu: 'gala:gala:, 'belba:
to gather together and lift dinner-time dragging a stick along the sand
'dali:e'manu:
to gather together and lift.

Explanation. This also refers to food being lifted on to the fire for dinner. A person drags a stick along the sand and stamps with one foot.

(129) *'leli: 'ga:dila: 'waniŋu: 'belgi: 'pana:*
wet sand(*a*) take him some distance away/throw away/stomach sand
'u:li:'aranu:
stomach(*b*).

Notes.—(*a*) Also *'aru.*
(*b*) The most common word used is *'tu:ni.*

Explanation. The informant believes this song to refer to a burial. Wet sand signifies that which is removed from the bottom of the grave. The body is removed to a place some distance away from the main camp. The relevance of the word " stomach " was not known.

(130) *'gurunba: 'buda: 'pa:laŋku: 'duldul'puŋu:*
heart try to clasp/nearly dead(*a*) to push away/hit
'gadiŋ'gadiŋju: 'ŋu:ra:
break into small pieces camp (hut:.

Note.—(*a*) The state of unconsciousness.

Explanation. Her heart aches, she tries to clasp the dying man to her ; she then pushes him away in sorrow and hits the hut, breaking part of it into small pieces.

(131) *'walba: 'r̄ur̄u:'r̄ur̄u: 'ḍa:li:'ḍa:li: 'ḍa:li:'ḍa:li:*
wind swallow saliva between the lips(*a*).

Note.—(*a*) Also *'wi:da.*

Explanation. The cold wind makes one swallow and moisten one's lips.

(132) *'wəru:'wəru: 'dara: 'wɔŋgara: 'ŋa:ri: 'guna:'mula: 'dara:*
to whittle a stick (*a*) making a noise/lie down excreta/nose (*a*)
'wɔŋgara: 'ŋa:ri:
making a noise lie down.

Note.—(*a*) Walking with one's legs wide apart.

Explanation. The meaning of this song is not apparent.

(133) *'bu:liŋa: 'ŋatula:'ŋatula: 'waruŋdi: 'ŋarada: ! 'guldu:*
a number of stones (*a*) fires There they are ! back of body/
'bagani:
stand up.

Note.—(*a*) The act of hitting another person on the thigh with the fist.

Explanation. The informant was not clear as to the meaning of this song.

(134) *'wala:'wala: 'djumbula: 'tji:wi: 'naraŋa: 'wɔnanu: 'jewil'ili:*
a child's spear-thrower left hand feet standing chase him a boy's name
'ŋa:wa:
see.

Explanation. The song refers to a child who has a spear-thrower held in his left hand. A boy called *'Jewil'ili* sees the other and chases him.

(135) *'ŋa:li: 'dara: 'ŋa:li: 'dara: 'mangara:'mangara:*
little toe put under sand little toe put under sand/lying back a little (*a*)
'indji:'rendjeri:
a small stick/an intake of breath from pain.

Note.—(*a*) I.e. not full-length, but in a semi-reclining posture.

Explanation. A person hurts his little toe, a small stick hidden in the sand having stuck into it. He sits down and lies back, drawing in his breath in pain.

(136) *'di:wi:əri: 'wi:əri: 'wala: 'ŋi:wi:ər-ri:'bala:*
scar finished spear-thrower shaft/fat/deaf

Explanation. The meaning of this song was not given by the informant.

(137) *'mundulbu: 'ŋaia: ! 'donana: 'buŋu: 'wi:bundi: 'ŋaia: !*
a boy's name Go and see ! runs around hit him wing Go and see !
'donana:
runs around.

Explanation. A boy called *'Mundulbu* is told to " Go and see ! " He runs around, sees a bird and hits it on the wing.

(138) *'mi:ru:*(*a*) *'mandji:la: 'ki:wa: 'la:lani: 'djena'gudu:*
spear-thrower pick it up rounded(*b*) wide day-break.

Notes.—(*a*) Also *'meru.*
(*b*) I.e. curved.

Explanation. At day-break the hunter picks up his spear-thrower ; he admires its curves and its width.

(139) *'buŋgula: 'juŋama: 'gala: 'jandjili:'jandjili:*
hit several times keep him brown licking
'bara:'juŋama:
a white flowering tree/keep him.

Explanation. The meaning of this song is not apparent, although it may refer to a small animal which may be hit several times in an attempt to kill it.

(140) *'walu: 'ḍi:ḍi: 'ganda:'raŋaru: 'jadalgu: 'ma:ma: 'ŋi:mi:*
big stone(*a*) children put foot on/mark on sand/(*b*) father lips
'wilgu:gu:'buŋu:
with stick/hitting.

Notes.—(*a*) A granite boulder.
(*b*) An individual name for a " kangaroo dog," i.e. a good hunting dog.

Explanation. The informant was not able to give the meaning of this song.

(141) *'ŋani: 'baga:'dilbi: 'wɔnma:'wɔnma: 'gandu'nini: 'wɔŋu: 'gudanu:'gudanu:*
hair becomes/white very far stand by me grass high (grass)
'wamba: 'ŋuria:'ŋuria: ! ' zeniŋ' zeniŋ 'wɔndada: 'ganduni: 'wɔŋu:
an old man " Find them ! " a bush mine stand grass
'gudanu:'gudanu:
high . . .

Explanation. This song refers to some children who are lost. *'ŋuria:'ŋuria:* literally means " Go out and search for them ! "—this is said to an old grey-haired man (usually called *'tjilbi* or *'d zilbi*, meaning " grey-haired "). The grass and bushes refer to the country in which the children are lost.

(142) *'guda:lu: 'gulbara: 'dja:gul'djuŋu: 'wɔndju:na: ! 'wɔnəra: 'ruŋga:'lala:*
brother go back tell im You wait there ! throw it hit it/wavy
'gana:'buda: 'gulbara: 'dja:gul'djuŋu: 'guna: 'ŋanaru:'ŋanaru:
yes/might be go back tell him excrete (*a*).

Note.—(*a*) To excrete standing up with knees bent and buttocks protruding.

Explanation. This song refers to a snake (mentioned by the word " wavy ") that is hit and turns to attack. One of those present tells his brother to go further away (*'gulbara*) while he throws his club at the snake. In fear the brother excreted.

(143) *' zeni:' zeni: 'bana: 'wɔnda: 'u:lu:'u:lu:ra: mi:'waru:'waru: ' zeniŋ'bana:*
a bush sand (*a*) (*b*) that fire bush/sand
'wɔnda:'u:lu:'u:lu:
(*a*)/(*b*).

Notes.—(*a*) The join of a broken spear which is properly dove-tailed, bound with kangaroo sinew and sometimes strengthened with gum.
(*b*) Meaning " hanging down," as does a dry branch from a tree.

Explanation. *'wɔnda:'u:lu:'u:lu:ra:* refers to a spear that has been mended but is now " as a dry branch from a tree " ; the first two words and *mi:'waru:'waru:* refer to the making of a fire in the sand so that the damaged spear may be held over and straightened into position.

(144*a*) *'mi:ru: 'badanu: 'gumbu: 'u:lu: 'walga:na: 'bendja:ri: 'wɔni:*
spear-thrower/bite urine flowing(*a*) markings white dog throw away.

Note.—(*a*) Lit. " hanging down."

Explanation. The informant did not know the meaning of this song.

(144*b*) *'djandu:la: 'badjanu: 'guna: 'mundəli:li: 'djandu:la: 'badjanu: 'gumbu:*
" boss "(*a*) bite him excreta (*b*) " boss " bite him urine
'u:lu:'u:lu:ra: 'guna: 'mudəli:li:
flowing excreta (*b*).

Notes.—(*a*) Referred to as a " big man " ; probably a camp or totemic head-man.
(*b*) To break up wood as tinder so that it will burn quickly.

Explanation. The informant was not able to give a meaning for this song.

R. AND C. BERNDT.

New Guinea : Archæology. **Williams.**

Rock Engravings, Normanby Island, D'Entrecasteaux Group, Territory of Papua. *By Rev. Henry Thomas Williams, Methodist Missionary Society, Territory of Papua.*

In December, 1940, the writer had the opportunity of examining a number of rocks bearing incised outline figures on their hard sandstone faces (see Plates Z and AA). The location of this unique work is about three miles to the west of the northern extremity of Sewa Bay, Normanby Island, D'Entrecasteaux Group (approximately 151° E. × 10° S.). The area is heavily timbered and not easily accessible.

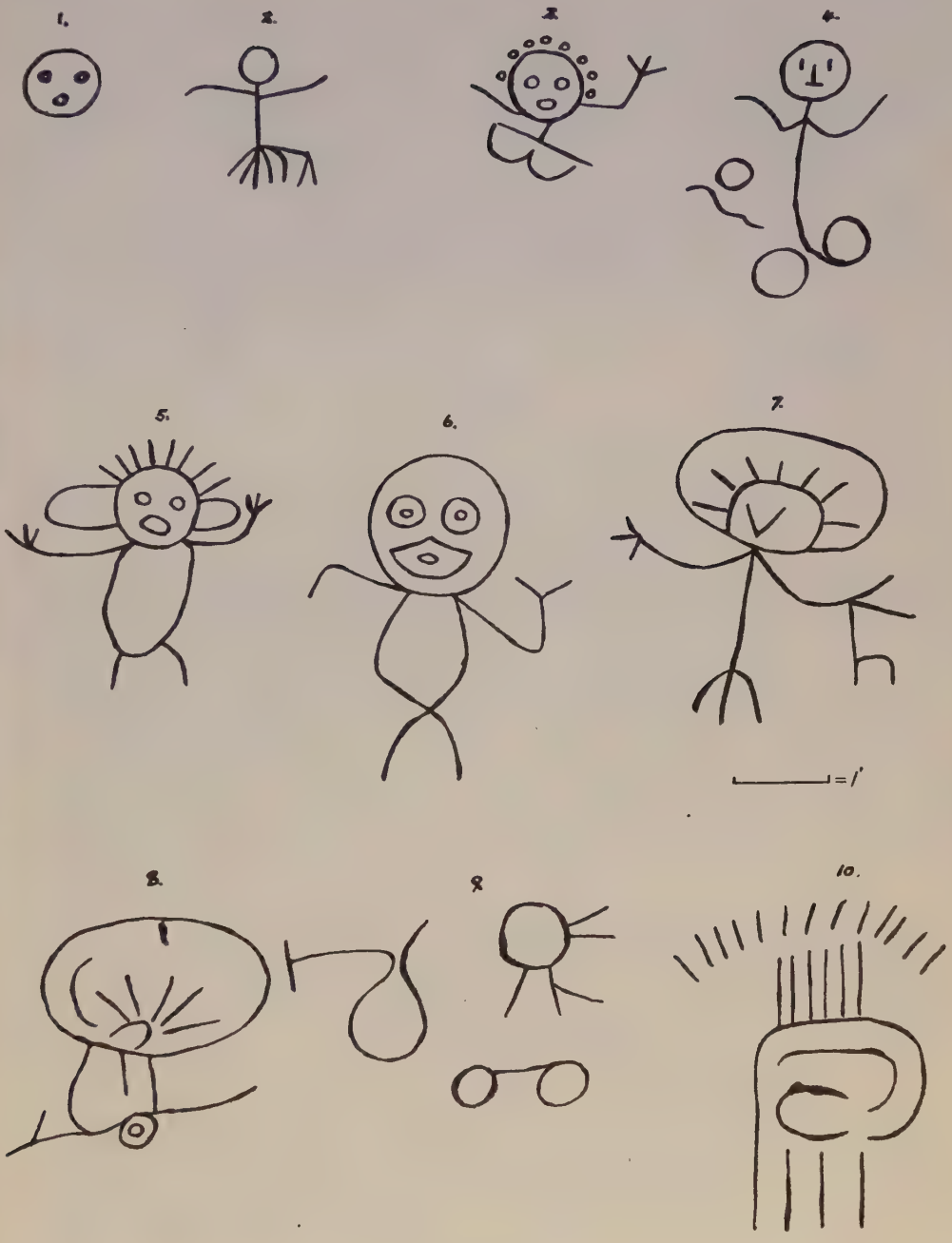
The twelve stones examined stand in a valley along which a stream only occasionally flows. Ascending the valley, two stones bearing markings are passed and then a cavern is reached which consists of a number of large upright stones, about 15 to 20 feet high. The interior of this cavern contains many designs, but owing to the darkness and their worn condition they were not traced. After rising to a level river-bed area, the next series of stones bearing markings are reached. All these design-bearing stones are in an almost straight line, about 250 feet in distance. At the time of the visit (December, 1940), the direction of the carvings was not noted with accuracy, but on reflection the south is convincingly suggested.

It was not possible at the time to photograph or prepare full-size tracings of the carvings, but those recorded were marked out with white chalk to bring them into clear relief, and they were accurately copied. The scale is to be taken as approximate.

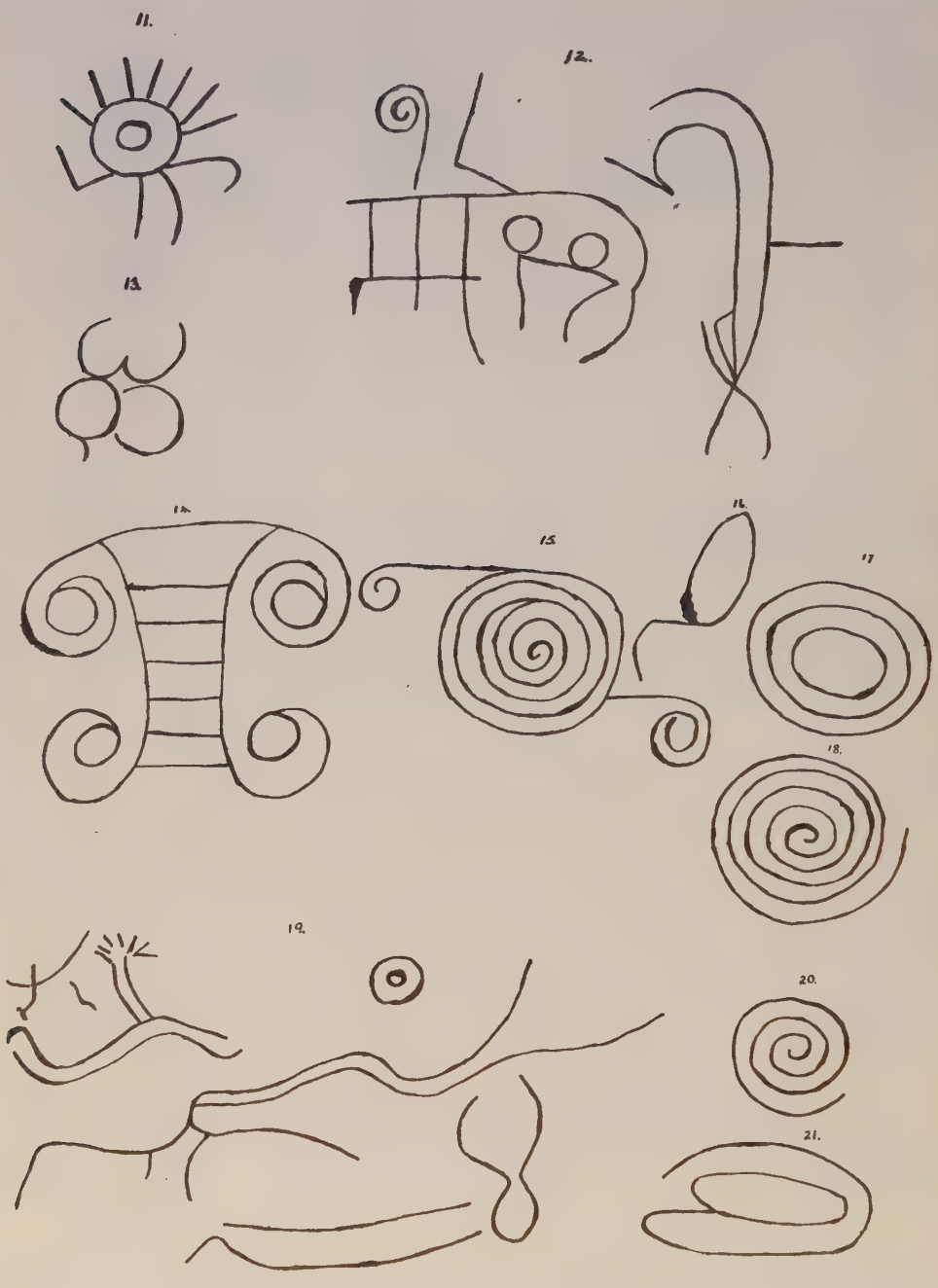
There was regularity in width and depth of the better preserved markings. The measurement of these is about half an inch wide and three-eighths of an inch deep. It is evident that an iron instrument was used for the work.[1] Many of the markings have been weather- or water-worn. This is especially true of those inside the cavern. The local natives stated that as the mountain catchment area was wide, the flow of water sometimes reached the height

[1] It is suggested that the carvings may have been made with either nephrite tools from Woodlark Island or obsidian axes from Normanby itself. It is surprising how easily sandstone lends itself to engraving by means of a stone tool only slightly harder than the surface to be engraved.—ED.

ROCK ENGRAVINGS, NORMANBY ISLAND, PAPUA.



ROCK ENGRAVINGS, NORMANBY ISLAND, PAPUA.



of five feet, temporarily submerged most of the carvings, and in the cavern severely buffeted the stones. A number of designs were not recorded owing to indistinctness.

My informants tell me that no other rock markings are known in the Sewa Bay area. In extensive travels among the island groups at the eastern end of Papua, the writer has not found anything to compare with these markings. They do not appear to be Papuan in character. Two Papuan wood carving designs alone are slightly suggested, viz. No. 10 is suggestive of a Trobriand Island comb and No. 14 of a Papuan canoe prow.

Nothing definite can be said concerning the origin of these carvings. The near villages have ceased to exist. The Papuans living close to Sewa Bay believe the markings to be the work of sprites (*werabana*)[2] and of very old origin. They would not attempt any interpretation of the designs except to say that they did not belong to their art.

H. T. Williams.

REVIEWS:

Social Anthropology in Polynesia: A Review of Research. *By Felix M. Keesing, Professor of Anthropology, Stanford University. O.U.P. Melb.* 1953. *x*, 126 *pp. Aust. retail price, 27/6.*

Professor Keesing introduces his book with these words: "The following report presents a summary of the work done to date in the field of Polynesian social anthropology, particularly as relevant to the programme and purposes of the South Pacific Commission and also an estimate of further research needs and priorities." He proceeds to define his terms and in particular the terms *Polynesia* and *Social Anthropology* from which we learn that the Polynesia of this book excludes such places as Hawaii and New Zealand and includes Nauru and the Gilberts and that the term *social anthropology* is not synonymous with the term *ethnology*.

The latter half of the book consists of a select bibliography of all items which are relevant to the problems of social anthropology and actually forms the documentation upon which the work as a whole depends. To items in this bibliography constant reference is made in the first half of the book where detailed consideration is given to questions of economic development, social development and health.

There is a tendency to think of Polynesia as a worked-out field. Peter Buck, in his *Introduction to Polynesian Anthropology*, as much as said so, and if anyone knew his subject, it was Buck. Of course, it is quite true to say that so far as knowledge of past Polynesian cultures is concerned little can be added to what we know. However, with regard to knowledge of contemporary modes of life, there are many gaps and wide gaps at that. To me, the particular virtue of this survey is that it emphasizes this aspect of Polynesian social anthropology and the urgent need and prime importance of filling in these gaps.

In his complementary study of Melanesian social anthropology, Professor Elkin has made a most careful examination of all the relevant material and has then shown where it is inadequate. Professor Keesing has tackled the problem differently. He has analysed the

[2] Géza Roheim translates this word as "witch." See his article on the "Witches of Normanby Island," *Oceania*, XVIII, pp. 279-308.—Ed.

many problems in the social and economic fields which are crying out for answers, and has then cited research by anthropologists which relates to the various problems posed. He admits that in many cases the anthropologist alone cannot supply the answers and suggests that perhaps the best method of tackling such cases is for the anthropologist to work as a member of a team consisting of a number of persons with experience in allied disciplines.

Perhaps the most interesting chapter of the whole book is that which summarizes the research needs and possibilities. It is very well done and could well be accepted as supplementing the projects outlined by Professor Elkin in his book, that is to say, these suggestions for research are not only relevant in the Polynesian field. They are of Oceanic relevance.

This book, like its companion volume, is destined to become a basic handbook of perennial value to all who are interested in the development of the native peoples of the Pacific, and not the least of its virtues is that it was written by one who has done more than most to foster that interest.

F. L. S. Bell.

Radiocarbon Dating. *By W. F. Libby. University of Chicago Press, Chicago.* 1952 *vii,* 124 *pp.*

Willard F. Libby, in collaboration with Dr. E. C. Anderson and Dr. James R. Arnold, developed the so-called carbon 14-dating method, that ingenious procedure which makes it possible to ascertain, within limits, the absolute age of matter of organic origin, such as wood, charcoal, shells, vegetable material of any description, e.g. dried corn knobs, bark, etc. So far, our only sources of information about it had been short papers published in *Science* and a few other American periodicals. Based on the American material, a few articles appeared in *Antiquity* (England). An authoritative monograph by Prof. Libby himself, therefore, satisfies an urgent need. It is explained in the Preface (p. v) that the method of radiocarbon dating was made possible through the work of Dr. A. V. Grosse and his collaborators at the Houdry Process Corporation, who concentrated the methane samples which first established the existence of radiocarbon in nature.

The principles of the method are set out in Chapter I. The discovery of cosmic radiation by V. F. Hess in 1911 aroused theories about the possible effects this radiation might have on the surface of the earth. " The specific energy, that is the energy per constituent particle, is very much higher than for any other type of radiation, averaging several billions of electron volts. It is conceivable, therefore, that the cosmic radiation will alter the earth's atmosphere in detectable ways " (p. 1). The world-wide distribution of radiocarbon is shown in Chapter II, which is followed by a detailed description of the ascertainment and measurement of radio-activity of matter, and a physical and mathematical demonstration of the chronological conclusions which may be drawn from the amount of accumulated energy produced by radiation over a considerable time. The great importance of this method is, at least for the time being, still to some extent impaired by several factors, viz. firstly, the fact that only materials of the categories mentioned above can be used for the test ; secondly, that the materials are required in certain substantial quantities ; thirdly—and this is a difficulty which is sometimes very hard to overcome—the danger of contamination. Furthermore, apart from contamination in the proper sense of this term, relics of the same antiquity

may, for perfectly legitimate historical reasons, occur in different strata, or at different depths, and in association with other objects of different age. The result would be that the radiocarbon dating of two finds belonging to the same cultural stratum may be different.

The importance of the new method for prehistoric archæology is demonstrated in a chapter contributed by Frederick Johnson (pp. 102 ff.) who points out that the belief that human culture in America was comparatively recent, survived as late as 1927, when the Folsom point was found in association with an extinct animal. Up to the present, only a few radiocarbon tests of finds from early American sites have been made, but Johnson states that at least the oldest known remains, especially Folsom, appear to be about 10,000 years old. About Tepexpán man, a recent discovery in the Valley of Mexico, Johnson observes that " the age . . . is presumed by the excavator to be about 11,003±500 years. His conclusion is based on the determination of the age of the peat deposit associated with the skeleton. However, the available archæological and geological information is not definite in all details," so that, before the exact place of Tepexpán Man " in the scheme of things can be accepted with confidence, additional dates and more definite data must be secured." This example shows that, although the radiocarbon-dating method is an objective scientific test, co-ordination with archæological factors and cultural aspects is desirable. Chapter VI is a survey of prehistoric-archæological results so far obtained, and this chapter (pp. 69 ff.) represents the most valuable section of the book for the student of prehistoric archæology. The tests are described under their number in the chronological order of experiments. They are not confined to America, but include cases from other parts of the world, viz. Australia and Polynesia. Two Australian examples were submitted by Mr. E. D. Gill (National Museum of Victoria), one from a kitchen midden near Goose Lagoon, in western Victoria, which turned out to be between 1,352 and 1,002 years old ; and the other from Koroit Beach, north-west of Warrnambool, Victoria, showing an age of 538±200, i.e. between 738 and 338 years. These figures are certainly interesting, but offer nothing really unexpected or surprising. It would be much more important to have a radiocarbon date of the strata excavated by Hale and Tindale at the Devon Downs years ago, but, of course, this is now impossible. Another test of real importance, if the necessary material could be obtained, would be that of the Portland-Mount Gambier-Kongerong area. The trouble with sites in the south-eastern corner of Australia is, as all students of the subject know, that so many surface sites and pseudo-surface sites (i.e. sites exposed by wind and rain in recent times) have been spoilt for many years by the undesirable type of amateur collectors. Fortunately, this is not the case in the north and north-west, so it would not be too late to try and secure suitable material for radiocarbon dating from there. We also hope that the necessary apparatus for these tests may be available in Australia in the not too distant future. It is understood that it already exists in New Zealand.

It is impossible here to quote more of the many important data given in Prof. Libby's book. Only one more of the many surprising revelations need be reproduced here to show the great importance of the American dates for future archæological research and reconstructive-historical speculation in the Pacific area. Tests carried out with material from Mexican ruins, in particular famous temples and step pyramids, prove that the antiquity of those ruins had been largely underestimated. Three results are available from Teotihuacan, two from the core of the pyramid of the Sun, one of which would place the structure in post-Christian times (between A.D. 233 and A.D. 633), while the other is earlier (between 982 B.C.

and A.D. 18); but the third result is from the Sun Temple, and it was obtained from wood from a large pillar, " probably part of support for a younger temple of Quetzalcouatl, superimposed on an older structure " (coll. by H. de Terra). The date lies between 1702 B.C. and 1244 B.C. Charcoal from the preceramic level at Tlaltilco yielded an average figure of between 4738 and 4138 B.C. It follows that it would be safe to discard any theory about an Asiatic origin of Mexican step-pyramids, at any rate their genetic relationship with mediæval structures like the Borobudur (eighth century A.D.) or the still more recent temples of Burma. Perhaps the possibility of repeated independent inventions and æsthetic devices in widely distant areas is, after all, not as remote as the " historical " school of ethnology wants us to presume. However, the further surprises which we may expect from radiocarbon dating, once it has been more perfectly developed, may lie in a totally different direction.

LEONHARD ADAM.

Native Welfare in Australia. *By Paul Hasluck, M.A., M.P. Perth.* 1953, 59 *pp.*

Mr. Hasluck's life-long interest in the welfare of the Australian Aborigines, exemplified by his book on " Black Australians," fitted him well for the portfolio which he now administers in the Commonwealth Government. In this booklet he summarizes in four speeches in Parliament the history of the problem from the early days of settlement, drawing attention to all major points bearing on the problem. In " A National Problem," given in 1950, the author calls for co-operation between the Federal and State Governments in measures for the social advancement of the Aborigines. He mentions the unequal distribution of the Aboriginal population in the States, their wide variety of competence to advance, their low social position among the Whites, and other matters in support of his claim that the problem is one for the whole Australian community, and that the Commonwealth Government, irrespective of where the Constitutional powers lie, should ensure that all essential action be undertaken. In his second speech, reviewing the Native Welfare Conference of 1951, Mr. Hasluck points out that there was an initial period, at the time of British settlement, when the Aborigines had equality before the law with British subjects, when civilization and Christianity were to be brought to them. This was followed by a very long period of protection, which, in the past fifty years, has gradually changed to a policy based on their welfare. This conference agreed that assimilation should be the object of all future native welfare measures. He points out that about two-thirds of the Aborigines are now detribalized. The curiosity of the native and his desire to benefit by the white man's way of life will defeat any attempt at complete segregation, while settlements of natives living as white men do are objectionable because they separate the communities from Australian people as a whole and build up minority groups.

In his third speech in 1951, entitled " The Record in the Northern Territory," Mr. Hasluck outlines the positive actions carried out in accordance with the modern welfare approach. The fourth speech, in 1952, describes the change in attitude on the part of Governments from protection to welfare. Mr. Hasluck's Presidential Address to the Section F, A.N.Z.A.A.S., Sydney, 1952, entitled " The Future of the Australian Aborigines," constitutes the final chapter. It is a rather abstruse discussion of the concept of change in Aboriginal life.

This booklet is a splendid and most constructive summary of the Aboriginal situation in Australia, dealing with practical efforts and theoretical problems alike in a convincing and charming style. It is a booklet that should be read by all White Australians because the solution of the problem is largely one of changing the white attitude to one of respect for the Aborigines.

F. D. McCarthy.

Anthropological Papers *Of the University of Alaska, Vol. I, No.* 1, 1952.

It is with great pleasure that we note the publication of a periodical devoted to the anthropology of the Eskimos. This first issue contains the following articles:

Observations on the Eskimo Type of Kinship and Social Structure, by J. L. Giddings, Jr.
Notes on Koniag Material Culture, by R. F. Heizer.
The Aleut-Eskimo Community, by W. S. Laughlin.
The Archæology of Hooper Bay Village, Alaska, by W. Oswalt.

The journal will no doubt become a treasure-house of Eskimo anthropology in the future, and its appearance is at a most opportune time in the history of these people. We wish it every success. Most of the literature dealing with the Alaskan Eskimo is to be found in the journals of various museums and universities in Canada and the United States, but it is varied and comprehensive in its range. The publication of a bibliography of this literature as a special issue of this new journal would be a valuable contribution to students, research workers and educationists.

F. D. McCarthy.

The Kadar of Cochin. *By Prof. U. R. Ehrenfels. Madras University Anthropological Series, No.* 1. 1952. 319 *pp.*, 26 *figs.*

This is the second new periodical devoted to anthropology to be reviewed in this issue of Mankind, and it has a rich field of research in south-western India.

Professor Ehrenfels has given this series an auspicious start. In this fine volume, he gives a detailed account of the life of one of the few food-gathering peoples of the region. Chapters are devoted to their history, environment, material culture, family and social organization, religion, education, pastimes, women, sex-life, and language, with additional analytical chapters on some of these aspects. The Kadar collect plant foods, hunt game in the forest, and fish in the streams. The gathering of honey is an important economic activity. To-day they exchange these products for rice and other goods in the trade stores. They live in local groups, of which there are no chiefs or head-men, and members of a group shift freely into other groups. There are no family, clan or regional names, but the family is the all-important unit in the community organization. Maternal relationship with patrilocal marriage are features of family life.

Rites carried out include tooth deformation, ear and nose piercing, and women are secluded at menstruation periods. The religion of the Kadar consists of three main elements. The Hindu type of worship, centred in Kali in various terrifying aspects, is the dominant theme. Two gods named Malavay and Malankuratti, who created the people and their

world in general, and also their daughter, form part of their pantheon, as do tree and nature spirits in various parts of the country.

Throughout the book the old indigenous customs are contrasted with the changes wrought in them in recent times, and the respective values of both are discussed. In the final chapter is given a summary of the culture and its elements. The life of the Kadar offers an interesting contrast to that of the semi-nomadic Australian Aborigines, and for this reason the book should be read by all anthropologists interested in peoples with a hunting and gathering economy.

F. D. McCarthy.

Maori Houses and Food Stores. *By Wm. J. Phillips. Dominion Museum Monograph, No.* 8. 1952. 212 *pp.*, 130 *figs.*

This beautifully printed and illustrated volume is a worthy continuation of the valuable series of publications on Maori ethnography issued by the Dominion Museum. It embraces a description of two previously little known types of Maori architecture, compiled from field observations over a period of years, published material, and museum records and specimens. The living houses are of some variety, as the classification reveals—thatched, bark-roofed, log-walled, tree-fern, Nikau-palm, circular and oval, Raupo-type, Manuka-type, and some superior kinds. Their construction, uses, furnishings and other features are described and illustrated from the olden times to the present day, or, in other words, throughout the period of white settlement in New Zealand. The food-stores are dealt with according to districts, and in this section a magnificent series of Maori wood-carvings is illustrated, and a further series from museums in other parts of the world is shown in the general section. A valuable aspect of the work is that characteristics of localized art styles in New Zealand are pointed out, and many useful comments are included about the differences between old and recent carvings. The analysis of the names and meanings of the parts of carved posts and other objects, and of design elements, will be most useful to students of primitive art.

F. D. McCarthy.

PROCEEDINGS OF SOCIETIES:

NEW SOUTH WALES:

Annual Report of the Anthropological Society of New South Wales, 1953. *Summary of the report delivered at the Annual Meeting of the Society, Tuesday, 15th December,* 1953.

Council has pleasure in submitting to members the Twenty-fifth Annual Report for the year ended 30th September, 1953.

Total membership is now 150, comprising one Benefactor, nine Life Members, six Honorary Life Members and 134 Ordinary Members.

During the year 12 new members were elected: Mr. Edouard Stiskin, Miss Edith Bodley, Mr. John Forgacs, Mr. Ernest Isles, Mr. John Meredith, Mr. John Thompson, Mr. Ernest Boulton, Mr. Stanley White, Miss Sylvia Hornidge, Mr. Walter Arndt, Mr. James Cochrane, Mr. George Delmar. Two members resigned, and we regret to announce the death of Dr. Daniel S. Davidson of the University of Washington, U.S.A. Three members were removed from the roll because of non-payment of subscriptions.

Six general meetings were held at the Department of Anthropology, University of Sydney, at which the following lectures were delivered:

1952.

November 25th.—Annual General Meeting. Presidential Address, "The Cohuna Cranium." N. W. G. Macintosh, M.B., B.S., Dip.Anthr.

1953.

March 3rd.—"The Art of New Guinea," by Mr. Colin Simpson.

April 21st.—"Educational Developments in New Guinea," by Dr. A. Capell, M.A., Ph.D.

June 9th.—A screening of colour films on the Ama Xhosa of South Africa, presented by Dr. J. Campbell Andrews, M.A., M.B., Ch.M.

July 28th.—"Fieldwork in the Eastern Highlands of New Guinea," by Mr. Ronald Berndt, M.A.

September 8th.—"An Anthropological Journey Through the Northern Territory," by Professor A. P. Elkin, M.A., Ph.D.

Six Council meetings were held during the year.

Two numbers of the Society's Journal, MANKIND, were published.: Vol. IV, No. 9, in November, and No. 10 in May. Our list of interstate and overseas subscribers now totals 60, and our exchange list 30. Three complete sets were sold to overseas subscribers during the year. The increase in the annual subscription to £1 this year made a much needed addition to our income, which is just sufficient to allow us to print two numbers of the Journal every year.

Four meetings of the Council of Management of the Australian Anthropological Association were held during this second year of the current biennial term. Owing to the lack of complete agreement among the affiliated societies, the Council of Management was constitutionally unable to carry out certain recommendations made at the 1952 A.A.A. Conference. Notable among these was the one recommending that application be made for permission to prefix the title Royal to the A.A.A. It now seems unlikely that agreement will be reached on this matter, which was first raised at the Australian Anthropological Association conference in Hobart in 1949. Your Council then considered this matter of the title Royal as it may apply to the N.S.W. Society, and was of the opinion that the Society possessed the essential qualifications required of an institute making such an application.

The latest advice received by Council on the proposed Aboriginal Relics Protection Bill is that it has been considered by the N.S.W. Surveyor-General's Department and is now being examined by the Government in relation to the existing provisions in respect of the Local Government Act. No finality has yet been reached, but we are assured of the Government's continuing interest in the proposed legislation.

Following representations made to the Minister for Territories that National Collections be made and preserved of specimens of the arts and crafts of the native peoples of Australia and her territories, Council is pleased to report that this recommendation has received favourable consideration. We are advised that a temporary collection has been established at the University of Queensland, and consideration is being given to further recommendations made by Council in this connection.

In February this year Council was advised that an area of land at Laughtondale, in the Windsor district, on which are several important groups of Aboriginal rock engravings, has been reserved for their protection and preservation.

The Society's Annual Prize this year was awarded to Third Officer Joan Bach, now attached to the Navy Office, Melbourne.

Council extends its thanks to Professor Elkin for the use of his own and the Department's lecture rooms for our meetings. We also wish to convey our thanks to our Honorary Auditor, Mr. D. R. Wylie, for his work on the balance sheet and for his audit of the Society's books.

After thirteen years as Honorary Treasurer, Mr. F. D. McCarthy has resigned from that position, but remains a member of Council. Our very sincere thanks go to Mr. McCarthy for the time and effort he devoted to this office, and it is to the lasting benefit of the Society that we had such an able Honorary Treasurer during this period.

The past year provided members with a varied and authoritative programme on the study of Man, both through the articles published in MANKIND and the lectures delivered by our guest speakers. We are pleased to report that attendances at these lectures were greater than last year, and averaged 40. Unfortunately our net gain in members was only five, a figure a good deal less than is required to extend or even maintain our activities.

CORRESPONDENCE, NOTES AND NEWS:

Stone Arrangements in Western Australia.

In Western Australia stone arrangements, as presently known, consist of small stones and cobbles, possibly a foot in length on the average, usually formed into circles less than four or five yards in diameter. Information is available for only two areas, the lower Murchison basin including the adjacent coastal country, and the western Kimberleys.

In the Murchison area appearances have been noted near Dongarra, Lake Logue on the coast, and at Mingenew. They are particularly common near Cue and Meekatharra (Mount Maitland), but nothing is known of their significance by local whites or the few surviving Aborigines. Since they have not been excavated it is impossible to say whether they do or do not mark graves, but in view of their relative scarcity and the available evidence on the modern method of burial in this general area, it would seem that if these circles are recent, they must have served some other function.

In the Kimberley district circles still are being constructed and serve two distinctly different uses, (*a*) as yards for dingo puppies, which by the time they are old enough to scale the barricade are too tame to make off, and (*b*) as inquest stones by which responsibility for a death is divined. By implication, therefore, it should be possible in most cases to determine the purpose of any given circle in this district from its construction, for the yards must be characterized by a fairly solid wall whereas the inquest stones can be openly spaced as, in fact, they generally seem to be.

For inquest purposes, the Ungarinyin and Worora erect an open circle of up-ended stones around the tree in which the body has been placed on a platform. Each stone is named for some individual who might have caused the death of the deceased. As putrefaction develops the droppings from the body are inspected and the "murderer" determined by the clues of blood or flesh which fall on or near the stone named for

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him. If we may judge by the size of some circles and their location in respect to the platforms it would be physically impossible for droppings to fall on many, if indeed any of the stones. Hence, the medicine-man who supervises the construction of the circle and assigns the names to the stones has tremendous power either to predispose the case or to induce evidence of guilt by his own means and to his own satisfaction. Further north where the stones are placed around earth burials it is maintained that blood comes out of the grave to rest on the stone representing the guilty person.

In so far as is presently known neither the specific arrangements of the stones nor their functions in Western Australia are directly comparable with the appearances in other parts of the continent.

D. S. DAVIDSON.

The Anthropological Society of the Northern Territory.

Readers of this Journal will be pleased to learn that on Tuesday, 23rd February, 1954, a number of residents of the Northern Territory met in Darwin and formed themselves into "The Anthropological Society of the Northern Territory." The Interim Council of the new Society consists of Bishop O'Loughlin, Rev. Father A. W. Haley, Rev. Ellemor, Mr. G. Sweeney and Mr. A. L. Ethell (Hon. Secretary).

The Society is seeking affiliation with the Australian Anthropological Association and hopes to become a rallying point for all persons resident in the Territory who are interested in Aboriginal culture and who are prepared to share and diffuse their knowledge of it.

We welcome the establishment of this Society and hope that it will have a long and useful life and make its own unique contribution to the solution of Australia's racial problem.

Anthropological Society of N.S.W.: Financial Position, 1952 and 1953.

Sir:

I have examined the cash books and vouchers of the Anthropological Society of N.S.W. for the period commencing 1st October, 1951, and ending 30th September, 1953, and certify that the following Statements of Income and Expenditure are correctly compiled therefrom and that in my opinion the accompanying Statements of Assets and Liabilities fairly set out the position of the Society at the concluding date.

The valuation of the stock on hand of MANKIND, as vouched for by the Honorary Secretary, has been accepted by me.

D. R. WYLIE,
Chartered Accountant (Aust.)

THE ANTHROPOLOGICAL SOCIETY OF NEW SOUTH WALES.

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 30TH SEPTEMBER, 1952.

EXPENDITURE.	£	s.	d.	INCOME.	£	s.	d.
To Printing and Stationery ..	13	7	10	By Subscriptions	78	14	7
,, Postage	20	6	4	,, Bank Interest	4	0	3
,, Insurance	0	5	0	,, Donations	3	9	6
,, Exchange	0	15	8	,, Sales of Journal MANKIND ..	34	19	10
,, Prize	2	2	0	,, Government Grant	100	0	0
,, Sundries	2	13	0	,, Excess of Expenditure over Income	61	0	6
,, Cost of Printing MANKIND, *less* Contributions from Victorian, South Australian and Queensland Societies	239	3	0				
,, Decrease in Stocks of MANKIND	3	11	10				
	£282	4	8		£282	4	8

BALANCE SHEET AS AT 30TH SEPTEMBER, 1952.

Liabilities.	£ s. d.	Assets.	£ s. d.
Society's Funds :		Stocks on Hand—Mankind ..	128 19 2
Balance as at 1st October, 1951	426 15 11	Library	50 0 0
Less Excess of Expenditure over Income for Year ended 30th September, 1952	61 0 6	Commonwealth Savings Bank ..	179 9 3
		Sundry Debtors	7 7 0
	£365 15 5		£365 15 5

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 30TH SEPTEMBER, 1953.

Expenditure.	£ s. d.	Income.	£ s. d.
To Printing and Stationery	12 13 8	By Subscriptions	152 3 5
,, Postage	19 12 0	,, Bank Interest	3 14 1
,, Insurance	0 5 0	,, Donations	2 19 0
,, Exchange	1 3 5	,, Sales of Journal Mankind ..	42 10 5
,, Prize	2 2 0	,, Government Grant	100 0 0
,, Sundries	0 9 6	,, Increase in Stocks of Mankind	14 1 6
,, Cost of Printing Mankind, *less* Contributions from Victorian, South Australian and Queensland Societies	272 15 6		
,, Excess of Income over Expenditure	6 7 4		
	£315 8 5		£315 8 5

BALANCE SHEET AS AT 30TH SEPTEMBER, 1953.

Liabilities.	£ s. d.	Assets.	£ s. d.
Society's Funds :		Stocks on Hand—Mankind ..	143 0 8
Balance as at 1st October, 1952 ..	365 15 5	Library	50 0 0
Add Excess of Income over Expenditure	6 7 4	Commonwealth Savings Bank—	
		General Fund .. £68 1 11	
		Society Fund .. 110 0 0	
			178 1 11
		Cash on Hand	1 0 2
	£372 2 9		£372 2 9

The Australian Anthropological Association

Members :

Anthropological Society of New South Wales.
Anthropological Society of the Northern Territory.
Anthropological Society of South Australia.
Anthropological Society of Queensland.
Anthropological Society of Victoria.

OFFICE-BEARERS, 1954-1955.

President : Mr. D. J. Tugby, B.Sc.

Hon. Secretary : Mr. R. C. Seeger 56 Jenkins St Northcote N.16.

Hon. Treasurer : Mr. H. R. Hammet.

OBJECTS.

(*a*) To promote the science of Anthropology.
(*b*) To hold biennial conferences of delegates from affiliated societies to deal with matters affecting affiliated societies generally, or the science of anthropology.
(*c*) To take public and official action in the interests of anthropology, as may be deemed desirable.
(*d*) To encourage affiliated societies to co-operate in every possible way.

The Anthropological Society of N.S.W. as such is not responsible for any opinion or declaration published in this magazine, by whomsoever expressed, unless specifically stated to be so by the Editor.

All communications, MSS., and proposed advertisements to be addressed to Mr. F. L. S. Bell, M.A., Editor, City of Sydney Public Library, George Street, Sydney.

Persons interested in the work of the Society please address correspondence to the Hon. Secretary.

The Anthropological Society of Victoria

(Founded 1932)

OFFICE-BEARERS, 1954.

President: Mr. D. J. Tugby, B.Sc.

Vice-Presidents: Mr. C. A. S. Mansbridge, B.A., F.R.G.S., Mr. H. R. Balfour.

Council:

Dr. Alan Griffiths, M.B., B.S., Col. Neil MacArthur, E.D., J.P., Mr. S. R. Mitchell, M.Aust.I.M.M., Rev. D. Rettick, Mr. H. C. Stewart.

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The Anthropological Society of Queensland

(Founded 1948)

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